Introduction to Volume 2, Draft EIS Comments and Responses

Background

The Draft EIS for the Sumas 2 Generation Facility project was published on March 15, 2000. The original comment period for the Draft EIS was to have ended on April 17, 2000, which was 30 days after publication. Prior to and during the public comment meetings on April 3 and 4, 2000, in Bellingham and Sumas, EFSEC received requests to extend the comment period. Based on these requests and as provided in the Washington Administrative Code (WAC) 197-11-455(7), EFSEC extended the comment period 15 days to May 2, 2000.

As of the close of the comment period, EFSEC had received a total of 1,872 comments; made up of the following:

- 294 written comments from 17 agencies and organizations;
- 1,247 written comments from 178 citizens, 851 of which were repeated on a form letter from 141 of the 178 citizens;
- a petition protesting the project signed by 112 citizens; and
- 331 oral comments from 48 speakers at the public meetings (from the court reporter transcripts).

Organization of Volume 2

This volume contains the written comments received during the comment period, the transcript from the April 3 and 4, 2000 public meetings, and the corresponding responses to those comments, organized into the following three sections:

1. This introduction

2. General Response to Comments on Certain Major Issues. Some complex issues were the subject of numerous written comments from individuals and agencies. In order to address these comments with a minimum of repetition, and to provide a response that is meaningful to decision makers, Volume 2 contains a number of General Responses that encompass many commentors' concerns on each issue. These General Responses include the following topics:

A. Potential Benefits and Costs of the Proposed Project
B. Visual and Socioeconomic Impacts of the Transmission Line in Canada
C. Wetland Impacts and Mitigation

D. Depletion of Groundwater Resources
E. Potential Deterioration of Groundwater Quality as a Result of Increased Extraction
F. Water Supply Characterization and Allocation Impacts
G. Impacts to Stream Baseflow
H. Environmental Risks Posed by the 2.5-Million-Gallon Diesel Fuel Storage Tank
I. Wastewater Disposal in Abbotsford
J. Impact of the Proposed Plant on Flooding
K. Cumulative Air Quality Impact Assessment
L. Health Effects of Transmission Lines
M. BACT Analyses

For each General Response, we have first provided a summary of the issue, then a response that addresses commentors' concerns and incorporates new information from pre-trial testimony, hearing testimony and examination, hearing exhibits, and settlement agreements.

3. Written comments received, and comments recorded in the public meeting transcripts, together with the corresponding responses. For each of the letters received during the comment period, as well as for each speaker at the public meetings, EFSEC assigned an identification number, in chronological order based on the date received or presented. Within each letter and transcript, comments on specific issues have been designated using a line and a (comment) number in the right-hand margin. In many cases, an individual's letter or transcript from their presentation contains numerous comments addressing a variety of topics.

Following each letter and transcript are the corresponding responses written by the EIS authors. The responses are numbered to match the numbering shown on the letters and transcripts.

As described in WAC 197-11-560, possible options for responding to comments on a Draft EIS include modifying the alternatives or developing new alternatives, improving or modifying the analysis, making factual corrections, or explaining why the comments do not warrant further agency response. In this regard, for each comment within each letter or transcript, we have provided additional information or elaboration on a topic previously discussed in the Draft EIS; noted how the EIS text has been revised to incorporate new information or factual corrections; referred the reader, when appropriate, to another comment response or one of the General Responses; explained why the comment does not warrant further response; or simply thanked the commentor when the commentor was stating an opinion in a particular comment.

References Cited in Volume 2

The responses in this volume reference the following types of documents:

- Documents that were submitted as exhibits by those who testified during the EFSEC Adjudicative Hearings or the PSD Hearings on the S2GF project. A list of these exhibits is provided below.

- The written transcript of the Adjudicative Hearings. The transcript was prepared by Flygare & Associates, Inc., a court reporter.

- Documents contained in the appendices of Volume 1 of the Final EIS. The settlement agreements contained in Appendix G are referenced many times throughout the responses in Volume 2. These agreements are also listed below for reference.

- Additional literature sources, which are listed below.

Adjudicative Hearing Exhibits Referenced in Volume 2

Exhibit 27. Applicant's Pre-filed Direct Testimony, Witness #8, Michael Woltersdorf. Dated April 13, 2000.

Exhibit 28.3. 1999 Biennial Energy Report. Challenges and Opportunities for Washington's Energy Future. January 1999.

Exhibit 28.4. Washington State Electricity System Study. Submitted to Washington State Legislature by Washington Utilities and Transportation Commission, Washington Department of Community, Trade and Economic Development. December 31, 1998.

Exhibit 42.2. Northwest Power Supply Adequacy/Reliability Study Phase I Report. Northwest Power Planning Council. Paper Number 2000-4. March 6, 2000.

Exhibit 133.1b. Sumas Energy 2 Generation Facility Air Quality Issue Summary. Issued September 11, 2000 for the members of the Lower Fraser Valley Air Quality Coordinating Committee (included as Appendix K in Volume 1 of the EIS).

Exhibit 154.5. Letter from Sumas Energy 2 to Hu Wallis, MELP. April 18, 2000.

Exhibit 154.6. Letter from Sumas Energy 2 to Hu Wallis, MELP. May 24, 2000.

Exhibit 155. Applicant's Prefiled Rebuttal Testimony, Witness Darrell Jones.

Exhibit 158. Applicant's Pre-filed Rebuttal Testimony, Witness Jeremy Pratt.

Exhibit 162.7. City of Abbotsford Development Services – statistical report excerpts. Printed from www.city.abby.bc.ca.

Exhibit 162.13. Letter from Sumas Energy 2, Inc. to Margaret Eckenfelder, Acting Assistant Deputy Minister, Ministry of Environment, Land and Parks, Victoria, British Columba. September 20, 2000.

Exhibit 170.2. Fact Sheet for Prevention of Significant Deterioration, Sumas Energy 2 Generation Facility. August 25, 2000.

Exhibit PSD-17. Letter from Eric Hansen, MFG Consulting Scientists and Engineers, to Allen Fiksdal, EFSEC Manager. October 4, 2000.

Agreements Contained in Volume 1, Appendix G

Exhibit 1 – Partial Settlement Agreement between Washington Utilities and Transportation Commission and Sumas Energy 2 Concerning Natural Gas Pipeline Issues

Exhibit 2 – Declaration of Curt Leigh in Support of Settlement Agreement between Washington Department of Fish and Wildlife and Sumas Energy 2

Exhibit 3 – Settlement Agreement between Washington Department of Fish and Wildlife and Sumas Energy 2

Exhibit 4 – Partial Stipulation Agreement between City of Sumas and Sumas Energy 2

Exhibit 5 – Supplemental Settlement Agreement between Washington Department of Fish and Wildlife and Sumas Energy 2 Regarding Wetlands

Exhibit JW-4 (attachment to Exhibit 5) – Wetland Delineation and Mitigation Report prepared by Bexar Environmental Consulting

Exhibit 6 – Settlement Agreement between Washington Department of Ecology and Sumas Energy 2

Exhibit 9 – Stipulated Withdrawal of Bonneville Power Administration

Exhibit 10 – Stipulation and Settlement Agreement Between Washington Utilities and Transportation Commission and Sumas Energy 2

Other Information Sources

Application for Site Certification. Sumas Energy 2, Inc., Dames & Moore, McCulley, Frick and Gilman, Bexar Environmental Consulting Ltd., Perkins Coie, and Foster Pepper. 2000. Sumas Energy 2 Generation Facility application for site certification agreement. Revised January 2000. (Application No. 99-1.) Submitted to Washington Energy Facility Site Evaluation Council, Olympia, WA.

Babbitt, J.T., Kharazi, A.I., Taylor, J.M.G., Rafferty, C.N., Kovatch, R., Bonds, D.B., Mirell, S.G., Frumkin, E., Dietrich, F., Zhuang, D., and Hahn, T.J.M. 1999. Leukemia/Lymphoma in Mice Exposed to 60-Hz Magnetic Fields; Results of the Chronic Exposure Study. EPRI Report TR-110338. Palo Alto, CA: Electric Power Research Institute.

Bonneville Power Administration, Resource Contingency Program, Washington. 1995. Final environmental impact statement, Satsop Combustion Turbine Unit 1, Chehalis Generation Facility, Volume 1, November.

Bracken, T.D. 2000. Whatcom County PUD-Bellingham Squalicum Transmission Line Project. Technical Report, Electrical Effects. T. Dan Bracken, Inc. March.

David Evans & Associates, Inc. 1996. Flood impacts of the Boundary Paper site. Sumas, WA.

DiGiovanni J., Johnston, D.A., Rumpp, R., Sasser, L.B., Anderson, L.E., Morris, J.E., Miller, D.L., Kavet, R., and Walborg Jr., E.F. 1999. Lack of effect of 60 Hz magnetic fields on biomarkers of tumor promotion in the skin of SENCAR mice. Carcinogenesis 20:685-689.

Frey, A.H. 1993. Electromagnetic field interactions with biological systems. Federation of American Societies for Experimental Biology Journal. 7:272-281.

Gammon, M.D., Schoenberg, J.B., Britton, J.A., Kelsey, J.L., Stanford, J.L., Malone, K.E., Coates, R.J., Brogan, D.J., Potischman, N., Swanson, C.A., and Brinton, L.A. 1998. Electric blanket use and breast cancer risk among younger women. Am J Epidemiol 148:556-563.

GeoEngineers. 1995. Report – preliminary geotechnical engineering services, proposed mini mill, Sumas, WA. Report prepared for Boundary Paper Company, Inc. October 27. Redmond, WA.

Green, L.M., Miller, A.B., Villeneuve, P.J., Agnew, D.A., Greenberg, M.L., Li, J.H., and Donnelly, K.E.A .1999a. Case control study of childhood leukemia in southern Ontario Canada, and exposure to magnetic fields in residences. Int J Cancer 82:161-170.

Green, L.M., Miller, A.B., Agnew, D.A., Greenberg, M.L., Li, J.H., Villeneuve, P.J., and Tibshirani, R. 1999b. Childhood leukemia and personal monitoring of residential exposures to electric and magnetic fields in Ontario Canada. Cancer Causes and Control 10:233-243.

IARC Working Group on the Evaluation of Carcinogenic Risks to Humans. 1999. IARC Monographs On The Evaluation Of Carcinogenic Risks to Humans. Volume 55: Solar and ultraviolet radiation. Lyon, France: International Agency for Research on Cancer (IARC) World Health Organization (WHO); February.

International Commission on Non-Ionizing Radiation Protection (ICNIRP). 1998. Guidelines on limits of exposure to time-varying electric, magnetic, and electromagnetic fields (1 Hz – 300 GHz). Health Physics 74:494-522.

Kelsh, M.A., and Sahl, J.D. 1997. Mortality among a cohort of electric utility workers, 1960-1991. Am J Ind Med. 31:534-544.

Kheifets, L.I., Gilbert, E.S., Sussman, S.S., Pascal, G., Sahl, J.D., Savitz, D., and Thériault, G. 1999. Comparative analyses of studies of magnetic fields and cancer in electric utility workers: studies from France, Canada, and the United States. Occupational Environmental Medicine. 1999; 56:567-574.

Kleinerman, R.A., Kaune, W.T., Hatch, E.E., Wacholder, S., Linet, M.S., Robison, L.L., Niwa, S., and Tarone, R.E. 2000. Are children living near high-voltage power lines at increased risk of acute lymphoblastic leukemia? Am J Epidemiol 151(5):512-515.

Kohut, A. P. 1987. Groundwater supply capability, Abbotsford upland. Water Management Branch, Province of British Columbia Ministry of Environment and Parks. May.

Linet, M.S., Hatch, E.H., Kleinerman, R.A. et al. 1997. Residential exposure to magnetic fields and acute lymphoblastic leukemia in children. New England Journal of Medicine 337:1-7.

McBride, M.L., and Gallagher, R.P. 1999. Power-frequency electric and magnetic fields and risk of childhood leukemia in Canada. Am J Epidemiol 149:831-842.

McCormick, D.L., Boorman, G.A., Findlay, J.C., Hailey, J.R., Johnson, T.R., Gauger, J.R., Pletcher, J.M., Sill, R.C., and Haseman, J.K. 1999. Chronic toxicity/oncogenicity evaluation of 60 Hz (Power Frequency) magnetic fields in B6C3F mice. Toxicologic Pathology 27:279-285.

Morris, J.E., Sasser, L.B., Miller, D.L., Dagle, G.E., Rafferty, C.N., Ebi, K.L., and Anderson, L.E. 1999. Clinical progression of transplanted large granular lymphocytic leukemia in Fischer 344 rats exposed to 60 Hz magnetic fields. Bioelectromagnetics 20:48-56.

National Institute of Environmental Health Sciences (NIEHS). 1998. Assessment of Health Effects from Exposure to Power-Line Frequency Electric and Magnetic Fields: Working Group Report. NIH Publication No. 98-3981. Research Triangle Park, NC: National Institute of Environmental Health Sciences of the U.S. National Institutes of Health.

National Institute of Environmental Health Sciences. 1999. Environmental Health Institute report concludes evidence is "weak" that electric and magnetic fields cause cancer. Press release accessed from http://www.niehs.nih.gov/emfrapid/html/EMF_DIR_RPT/pressrel.htm.

National Institute of Environmental Health Sciences (NIEHS). 1999. Assessment Health Effects from Exposure to Power-Line Frequency Electric and Magnetic Fields. NIH Publication No. 99-4493. National Institute of Environmental Health Sciences of the U.S. National Institutes on Health.

National Radiological Protection Board. 1992. Electromagnetic fields and the risk of cancer. Volume 3, No. 1. Chilton, England.
National Research Council. 1996. No adverse health effects seen from residential exposure to electromagnetic fields. October 31.

National Research Council, Commission on Life Sciences, Board on Radiation Effects Research, Committee on the Possible Effects of Electromagnetic Fields on Biologic Systems. 1997. Possible Health Effects of Exposure to Residential Electric and Magnetic Fields. Washington, D.C: National Academy Press

National Research Council. 1997. An Evaluation of the U.S. Navy's Extremely Low Frequency Communications System Ecological Monitoring Program. National Academy Press, Washington, DC. 162 pp.

Norecol Dames & Moore. 1999. Environmental Assessment Report, Sumas Energy 2, Inc. 230 kV Electric Transmission Line, Sumas, Washington to BC Hydro's Claburn Substation, Abbotsford, B.C. June 30, 1999.

Oak Ridge Associated Universities Panel. 1992. Health effects of low-frequency electric and magnetic fields. (ORAU 92/F8.) Prepared for the Committee on Interagency Radiation Research and Policy Coordination. U.S. Government Printing Office. (GPO #029-000-00442-9.)

Robinson & Noble, Inc. 1992. Construction report, City of Sumas, May Road well 1. July. Prepared for City of Sumas. Tacoma, WA.

Sagan, L.A. 1991. Epidemiological and laboratory studies of power frequency electric and magnetic fields. Journal of the American Medical Association, 268:625-629.
Sahl, J.D., Kelsh, M.A., and Greenland, S. 1993. Cohort and nested case-control studies of hematopoietic cancers and brain cancer among electric utility workers. Epidemiology 4:104-114.

Savitz, D.A., and Loomis, D.P. 1995. Magnetic field exposure in relation to leukemia and brain cancer mortality among electric utility workers. Am J Epidemiol 141:123-34.
Thériault, G., Goldberg, M., Miller, A.B., Armstrong, B., Guénel, P., Deadman, J., Imbernon, E., To, T., Chevalier, A., Cyr, D., and Wall, C. 1994. Cancer risks associated with occupational exposure to magnetic fields among electric utility workers in Ontario and Québec, Canada, and France: 1970-1989. Am J Epidemiol. 139:550-572, 1994. Author's corrections to data are published in Erratum: Am J Epidemiol 1994; 139:1053.

United Kingdom Childhood Cancer Study Investigators. 1999. Exposure to power frequency magnetic fields and the risk of childhood cancer. The Lancet 353(9194):1925-31.

U.S. Environmental Protection Agency (USEPA). 1993. Reference Dose (Rfd): Description and Use in Health Risk Assessments. IRIS. Washington, DC: Office of Research and Development.

U.S. Environmental Protection Agency (EPA). 1996. Guidelines for Carcinogen Risk Assessment. Washington DC.

U.S. Geological Survey. 1999. Hydrogeology, groundwater quality, and sources of nitrate in lowland glacial aquifers of Whatcom County, Washington and British Columbia, Canada. Water Resources Investigations Report 98-4195.